

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name **1-Propanol**

Stock number: A19902

CAS Number: 71-23-8

EC number: 200-746-9

Index number: 603-003-00-0

**1.2 Relevant identified uses of the substance or mixture and uses advised against.**

Identified use: SU24 Scientific research and development

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Alfa Aesar GmbH & Co.KG  
A Johnson Matthey Company  
Zeppelinstr. 7b  
76185 Karlsruhe / Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300  
Email: tech@alfa.com  
www.alfa.com

**Informing department:**

Product safety Tel + +049 (0) 7275 988687-0

**1.4 Emergency telephone number:**


Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008** GHS02 flame


Flam. Liq. 2, H225 Highly flammable liquid and vapour.

 GHS05 corrosion

Eye Dam. 1, H318 Causes serious eye damage.

 GHS07

STOT SE 3, H336 May cause drowsiness or dizziness.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Xi; Irritant

R41: Risk of serious damage to eyes.

 F; Highly flammable

R11: Highly flammable.

R67: Vapours may cause drowsiness and dizziness.

**Information concerning particular hazards for human and environment:**

Has a narcotizing effect.

**Other hazards that do not result in classification**

No information known.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms**

The substance is classified and labelled according to the CLP regulation.



GHS02 GHS05 GHS07

**Signal word**

Danger

**Hazard statements**

H225 Highly flammable liquid and vapour.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

CAS# Designation: 71-23-8 1-Propanol

Identification number(s):

EC number: 200-746-9

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**SECTION 4: First aid measures****4.1 Description of first aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact**

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult doctor.

**After swallowing**

Seek medical treatment.

**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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**4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**  
**Suitable extinguishing agents** CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

**5.2 Special hazards arising from the substance or mixture** If this product is involved in a fire, the following can be released:  
Carbon monoxide and carbon dioxide

**5.3 Advice for firefighters**  
**Protective equipment:** Wear self-contained breathing apparatus.  
Wear full protective suit.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources

**6.2 Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.  
Do not allow product to reach sewage system or water bodies.  
Do not allow to enter the ground/soil.

**6.3 Methods and material for containment and cleaning up:** Keep away from ignition sources.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.

**Prevention of secondary hazards:** Keep away from ignition sources.  
**6.4 Reference to other sections** See Section 7 for information on safe handling  
See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.

**Information about protection against explosions and fires:** Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.  
Keep ignition sources away - Do not smoke.

**7.2 Conditions for safe storage, including any incompatibilities**  
**Storage**  
**Requirements to be met by storerooms and containers:** Store in cool location.  
**Information about storage in one common storage facility:** Store away from oxidising agents.  
**Further information about storage conditions:** Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.

**7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

**Additional information about design of technical systems:** Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**8.1 Control parameters****Components with critical values that require monitoring at the workplace:****71-23-8 1-Propanol (100,0%)**

PEL (USA) Long-term value: 500 mg/m<sup>3</sup>, 200 ppm  
REL (USA) Short-term value: 625 mg/m<sup>3</sup>, 250 ppm  
Long-term value: 500 mg/m<sup>3</sup>, 200 ppm  
Skin  
TLV (USA) Long-term value: 246 mg/m<sup>3</sup>, 100 ppm

**Additional information:** No data

**8.2 Exposure controls**

**Personal protective equipment**  
**General protective and hygienic measures** The usual precautionary measures should be adhered to in handling the chemicals.  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes.  
Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use breathing protection with high concentrations.  
**Protection of hands:** Check protective gloves prior to each use for their proper condition.  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Material of gloves** Impervious gloves  
**Penetration time of glove material** Not determined  
**Eye protection:** Tightly sealed safety glasses.  
Face protection  
**Body protection:** Protective work clothing.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

**Form:** Liquid  
**Colour:** Clear  
**Smell:** Alcohol-like  
**Odour threshold:** Not determined.

**pH-value:** Not determined.

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<b>Change in condition</b>	
Melting point/Melting range:	-127 °C
Boiling point/Boiling range:	97 °C
Sublimation temperature / start:	Not determined
<b>Flash point:</b>	15 °C
<b>Inflamability (solid, gaseous)</b>	Not determined.
<b>Ignition temperature:</b>	824 °C
<b>Decomposition temperature:</b>	Not determined
<b>Self-inflamability:</b>	Not determined.
<b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
<b>Critical values for explosion:</b>	
Lower:	2,1 Vol %
Upper:	13,5 Vol %
<b>Steam pressure at 14 °C:</b>	13,3 hPa
<b>Density at 20 °C</b>	0,804 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
Water:	Fully miscible
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
dynamic:	Not determined.
kinematic:	Not determined.
<b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No information known.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used and stored according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	Reacts with strong oxidizing agents
<b>10.5 Incompatible materials:</b>	Oxidising agents
<b>10.6 Hazardous decomposition products:</b>	Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information**

<b>11.1 Information on toxicological effects</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
<b>Acute toxicity:</b>	
<b>LD/LC50 values that are relevant for classification:</b>	No data
<b>Skin irritation or corrosion:</b>	May cause irritation
<b>Eye irritation or corrosion:</b>	Causes serious eye damage.
<b>Sensitization:</b>	No sensitizing effect known.
<b>Germ cell mutagenicity:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
<b>Carcinogenicity:</b>	ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.
<b>Reproductive toxicity:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
<b>Specific target organ system toxicity - repeated exposure:</b>	No effects known.
<b>Specific target organ system toxicity - single exposure:</b>	May cause drowsiness or dizziness.
<b>Aspiration hazard:</b>	No effects known.
<b>Subacute to chronic toxicity:</b>	No effects known.
<b>Additional toxicological information:</b>	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**SECTION 12: Ecological information**

<b>12.1 Toxicity</b>	No further relevant information available.
<b>Aquatic toxicity:</b>	No further relevant information available.
<b>12.2 Persistence and degradability</b>	No further relevant information available.
<b>12.3 Bioaccumulative potential</b>	No further relevant information available.
<b>12.4 Mobility in soil</b>	No further relevant information available.
<b>Additional ecological information:</b>	
<b>General notes:</b>	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Avoid transfer into the environment.
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT:</b>	Not applicable.
<b>vPvB:</b>	Not applicable.
<b>12.6 Other adverse effects</b>	No further relevant information available.

**SECTION 13: Disposal considerations**

<b>13.1 Waste treatment methods</b>	Hand over to disposers of hazardous waste.
<b>Recommendation</b>	Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
<b>Uncleaned packagings:</b>	
<b>Recommendation:</b>	Disposal must be made according to official regulations.
<b>Recommended cleaning agent:</b>	Water, if necessary with cleaning agent.

**SECTION 14: Transport information**

<b>UN-Number</b>	UN1274
<b>ADR, IMDG, IATA</b>	
<b>14.2 UN proper shipping name</b>	1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL)
<b>ADR</b>	N-PROPANOL (PROPYL ALCOHOL, NORMAL)
<b>IMDG, IATA</b>	

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**14.3 Transport hazard class(es)**

**ADR**



**Class Label IMDG, IATA** 3 (F1) Flammable liquids.  
3



**Class Label** 3 Flammable liquids.  
3

**Packing group ADR, IMDG, IATA** II

**14.5 Environmental hazards:** Not applicable.

**14.6 Special precautions for user** Warning: Flammable liquids.  
**Kemler Number:** 33

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**Transport/Additional information:**

**ADR**

**Excepted quantities (EQ):** E2  
**Limited quantities (LQ)** 5L  
**Transport category** 2  
**Tunnel restriction code** D/E

**UN "Model Regulation":** UN1274, n-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Australian Inventory of Chemical**

**Substances** Substance is listed.

**Standard for the Uniform Scheduling of Medicines and Poisons** Substance is not listed.

**National regulations**

**Information about limitation of use:** Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**Other regulations, limitations and prohibitive regulations**

**ELINCS (European List of Notified Chemical**

**Substances)** Substance is not listed.

**Substances of very high concern (SVHC) according to REACH, Article 57** Substance is not listed.

**REACH - Pre-registered substances** Substance is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:**

**Abbreviations and acronyms:**

Health, Safety and Environmental Department.

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

DE/E